

in these cases, in addition to a change in the proportion of the normal constituents of the blood, of which the diminution of its albumen is one, there is always an excess of urea.

"Then it may be asked, 'to what is the effect upon the nervous system owing?' One can conceive that it may result either—1. From the continued presence of the noxious principle in the blood; or, 2. From the balance of the constituents of the blood having been destroyed; or, 3. From the diseased condition of the kidney—though to which of these we ought to attribute it, would be difficult to decide.

"But at whatever conclusion we arrive with respect to these interesting points, I am sure all will agree with me, that, taking the circumstances into consideration, it is probable the kidneys play a more important part in these paralytic affections than has been suspected, and that the subject deserves more attention than it has received. For, we find that in cases of convulsions terminating in paralysis, we may have albuminuria; in paralysis before delivery, without convulsions, we may have albuminuria; in paralysis occurring after delivery, we may have albuminuria; and further, that in the slighter cases, both the convulsions and paralysis diminish with the decrease of the albuminous secretion. Whether, therefore, the paralysis be caused by the state of the kidneys, or the renal congestion and paralysis be both the result of some morbid matter in the blood circulating through the system, it is clear that a new element may be added to those which have usually been considered as giving rise to paralysis.

"Nor is this barren theory only; but, if it be true, it has a direct bearing upon practice, inasmuch as our attention ought not to be confined to the secondary affection of the nervous system in such cases, but must be directed to the relief of the renal malady, and to the restoration of the kidneys to such a state of efficiency as may enable them to remove the morbid constituents of the blood; and for our encouragement, we have seen that a diminution of albumen in the urine is followed by mitigation and cure of the paralysis. For the latter affection, bloodletting, general when the system will bear it, or local by means of leeches or cupping; blisters, purgatives, and mercury, are the remedies usually employed; these must be modified according to the condition of the patient, the circumstances of the attack, and the duration of the disease. When much blood has been lost during labour, bloodletting must be omitted, and we must confine ourselves to counter-irritation; perhaps a series of small blisters to the neck, down the spine, or along the limb, will be the best mode of proceeding. The patient's strength must be supported judiciously by good diet, and it is quite possible that some stimulant, such as ammonia or camphor, may be necessary. When the paralysis has become chronic, strychnia or galvanism may be found useful; and I believe Dr. Stokes has found galvanic acupuncture very beneficial in facial paralysis.

"The renal disorder should never be treated by diuretics, but by external irritants, such as mustard poultices, or rubefacient liniments to the loins, and internally by diaphoretics, as suggested by Dr. Osborne¹ of this city, and when more chronic, by gallic acid, iron, &c."

37. *Inversio Uteri taking place during Labour.*—DR. GEORGE JOHNSTON, submitted to the Dublin Obstetrical Society, a case of this which came under his notice while assistant in the Dublin Lying-in Hospital.

Esther Page, aged 19, a thin delicate-looking woman, of fair complexion, was delivered of her first child, a healthy girl, on the 31st of July, 1851. Her labour so far was easy, and of about six hours' duration. The gentleman in attendance, after having tied and separated the funis, had maintained the contraction of the uterus with the hand above the fundus—in accordance with the usual practice of the hospital—for about a quarter of an hour, when finding a tendency to "draining," he increased his pressure; but, as he said, not nearly to the extent it had been, on frequent occasions, found necessary to employ, in order to assist in the expulsion of the placenta, or restrain hemor-

¹ On the Nature and Treatment of Dropsies, &c. 1837.

rhage. The uterus was felt suddenly to yield and recede from his grasp, and he immediately saw it expelled from the vagina, an inverted mass, with the placenta still attached. Dr. Johnston was at once sent for; on his arrival he found the woman pallid, exceedingly anxious, complaining of considerable pain, and a sensation of sinking; the pulse was weak, indeed scarcely to be felt.

Examination proved the uterus to be inverted with the placenta attached to its fundus; the funis was of the ordinary length, and there was then no hemorrhage. Recollecting that the lapse of every minute was of consequence, Dr. Johnston proceeded to replace it at once, which he accomplished in the following way: He first detached the placenta—a matter of no difficulty, there being no morbid adhesion—and he was pleased to find that after it was separated, no hemorrhage followed, owing, he considered, to the constriction the vessels underwent at the cervix; he then restored the cervical portion of the inverted organ, which was easily returned within the vagina, and reinverted as far as the body; but it was some time (five to seven minutes) before he could reduce the fundus, which required the fingers to be held in a flexed condition against it, while he made counter-pressure with the left hand above the pubis. Some wine had been given to the patient to relieve the sensation of exhaustion, but it was not till the uterus had been restored to its natural state that she could be persuaded her immediate dissolution was not close at hand; ergot was afterwards administered, and she was kept longer in the horizontal position than ordinarily. Milk was secreted on the third day; she made a perfect recovery, and was discharged quite well.

Dr. George Johnston then proceeded to remark as follows:—

“That inversion of the uterus very rarely takes place, is universally allowed by all obstetric writers.

“Denman, Rigby, and Churchill, all agree in believing it to be an accident of ‘rare occurrence.’

“Ashwell says: ‘It is most rare,’ and in proof states that, in more than 8,000 labours occurring in Guy’s Hospital, and upwards of 1,600 in another charity, there was not a single instance of it; if others were wanting, the records of our own hospital show (according to Hardy and McClintock) that, during the masterships of Doctors Clarke, Labatt, Collins, Kennedy, and Johnson, the number of deliveries amounting to 75,911, not one case of this description occurred; and I may add that, subsequent to that period, for three years and eight months of the management of the present master, Dr. Shingleton, 7,336 patients were delivered previous to the occurrence of the one I have just related, so that in 83,247 deliveries, there was not a single instance of its being met with.

“But, ‘*inversio uteri*,’ although rare, is nevertheless considered to be one of the most formidable complications that affect the lying-in patient, being attended with very alarming symptoms, and threatening the most serious consequences. For instance, the patient is found complaining of excruciating pain, with a sense of sinking and extreme exhaustion; an almost imperceptible pulse; a countenance expressive of great anxiety and collapse, together with nausea, vomiting, and sometimes hemorrhage and convulsions; in fact, the symptoms in a case of inversion resemble in many points those attendant on rupture of the uterus; but this former accident can be generally distinguished from rupture by the period at which it takes place, viz., after the birth of the child; by the sudden recession of the round, circumscribed tumour, if the uterus be grasped after the delivery of the child, or its absence, when searched for. All doubt is set at rest by finding a globular fleshy body occupying the os uteri, if the inversion be partial; or protruding quite through the os and vulva, if it be complete; thus forming, as it were, a sac lined by peritoneum, a diverticulum from or extension of the abdominal cavity, filled by the small intestines. It is this sudden evacuation of so large a portion of the contents of the abdomen, which produces that severe shock on the nervous system, from which there is great danger the patient may not rally, death in more than one instance having been the result.

"This accident has been attributed to various causes, viz :—

"1. To undue pulling at the funis for the purpose of extracting the placenta before it is completely separated.

"2. To an over-amount of pressure with the hand on the fundus uteri.

"3. To too rapid delivery, especially if the woman be standing at the moment of the quick expulsion of the child.

"4. To the cord being too short, or twisted round the neck or body of the child.

"5. To violent straining during the last pains : violent efforts, as coughing, vomiting, sneezing, or by sudden attempts to rise in bed, by which the abdominal muscles are put into violent action.

"6. It may take place spontaneously.

"That it may be produced by the first two causes, no doubt at all exists, particularly the first—'if,' as Dr. Ramsbotham observes, 'the placenta be adherent to the fundus; if the adhesion be strong; if the funis does not give way to the force applied to it; and if the uterus be flaccid, and has not contracted round the mass.' And with regard to the second, Rigby goes so far as to say: 'If immediately after delivery, especially where the uterus has been suddenly emptied of its contents, any force be applied to the fundus, it may easily be pushed down into the cavity.'

"That it may result from the occurrence of too rapid delivery, especially while the woman is in the erect posturo, is possible: but such cases of delivery have frequently come under the notice of those connected with the Dublin Lying-in Hospital, and yet no such accident has taken place.

"As to shortness of the cord, or the twisting of it round the neck of the child, numerous instances of the kind could be brought forward where there was no attempt at inversion.

"That violent strainings or efforts, or sudden attempts to rise in bed, have been the cause of this accident, instances are given by Cazeaux: one, where complete inversion took place nine hours after delivery, from rising to the night-chair; another, where complete inversion resulted twelve days after delivery, in consequence of straining efforts at stool. Lastly, that it occurs spontaneously; an instance is given in the author's notes on Denman, where, after the funis had been divided, and the doctor engaged with the child, not the slightest extension having been made on the cord—'in fact, it had not been touched by the hand'—the uterus was inverted, with the placenta attached.

"Dr. Rigby, in giving a case of this description, says: 'The descent was so rapid and forcible through the os externum, that it would have been quite impossible to have resisted the unnatural action by which the organ was carried down;' and Ruysch saw it take place after the expulsion of the placenta, although delivery had occurred in the most favourable way.

"The predisposing causes of inversion are, according to Radford, owing to atony of the uterus, or active constriction of one part, with an atonic condition of another.

"Dr. Tyler Smith says it depends upon an irregularly active and a very unusual condition of the uterus, by which the fundus is first depressed, then carried downwards by the annular contraction of the organ, and finally completely inverted.

"Cazeaux states, that the uterus, being for a moment in a condition of inertia, the pressure or weight of the intestinal mass upon the fundus may depress it like the bottom of a bottle; and when the placenta is inserted directly on the superior part of the uterus, its weight alone may (in a case of complete inertia) draw down the fundus. This, he says, however, generally corrects itself by the contraction of the viscus; but if (this depression not being perceived) traction is made on the cord, or pressure on the fundus, it may be greatly increased, and converted into complete inversion: this was probably the cause in the case just narrated.

"With regard to the treatment of this accident, it is universally agreed upon, that the immediate reduction of the inversion is the best practice, when 'we find'—as Denman remarks—'no difficulty, or very little, in restoring the uterus to its perfectly proper situation.' But difference of opinion exists as to

the mode of acting when the placenta is still adherent to the uterus; some recommending the returning of the tumour before detaching it. For example, Newenham advises 'returning the uterus first, and exciting it to throw off the placenta afterwards in the usual way; 'which,' he says, 'will have good effect in bringing on that regular and natural contraction which is the hope of the practitioner and the safety of patient: that the removal of the placenta first, in order to diminish the bulk of the inverted fundus, cannot possibly be attended with any beneficial consequences, whilst the irritation induced by such a proceeding will necessarily tend to bring on those pressing-down efforts which would present a material obstacle to its reduction, and would increase the hemorrhage at a period when every ounce of blood is of infinite importance.' Denman goes half way with the above maxim, for he says: 'If the placenta be partly separated, it will be proper to finish the separation before we attempt to replace the uterus; but if the placenta should wholly adhere, it will be better to replace the uterus before we endeavour to separate the placenta.' And his reason he asserts to be: 'That while we are separating the placenta, the cervix of the uterus is speedily contracting, and the difficulty of replacing it increasing, which is a far greater evil than a retained placenta.'

"Now, though Dr. Newenham's and Dr. Denman's ideas may be perfectly correct in cases where the uterus is partially inverted, that is, where the fundus only is displaced, nevertheless, in cases of complete inversion, although we find Dr. Williams saying, that 'the organ, with the placenta still adhering, was promptly returned to its proper situation,' Dr. Merriman states, that the mass of the placenta was the chief cause of the difficulty in a case which he has related. 'I tried,' says he, 'to effect the reduction without removing the placenta, but could by no possibility accomplish it till I had first separated the placenta; this being effected, I succeeded to my entire satisfaction in re-inverting the fundus.'

"For my part I am of opinion that, in cases of complete inversion, it is the best and simplest treatment to detach the placenta in the first instance (which is easily, and in a very short time accomplished), and then to reinvert the uterus, a matter also of but little difficulty, as it is then much diminished in bulk. The objection that Denman raises to this practice is not, I conceive, a very strong one; for 'the time' it takes to peel off a placenta, under these circumstances, would be far less than that which would be occupied in trying to force so large a body as the placenta with the uterus back through the vagina and os. As to the occurrence of an increase of hemorrhage from thus proceeding, I consider there is no danger, or at most but trifling. Even Dr. Denman, in the history of the case, where he pursued this line of treatment, informs us, that 'the hemorrhage was not profuse,' and 'that regular and natural contraction,' which, as Dr. Newenham observes, 'is the hope of the practitioner, and the safety of the patient,' is, I think, more likely to be produced when the uterus is empty, than when it still contains the foreign body, which its efforts to expel had been the cause of the production of that very displacement we are called upon to remedy. The placenta having been detached, we proceed to reduce the tumor by grasping the body of the organ, and pushing it with the vagina in the axis of that passage, continuing this pressure till we meet the os, when the first obstruction presents itself; but, by the steady maintenance of our pressure, and by moulding, if I may so express myself, gradually and progressively, first, the cervix, and then the body through the os, we complete the reduction by pushing, lastly, the fundus upwards.

"With regard to the manner in which the last stage of the operation is completed, one recommends the fingers to be held in the form of a cone, another spread out at equal distances; but I held them in a flexed condition, pressed against the displaced fundus, and continued steady pressure till that portion was righted; and, in fine, held the hand in the cavity of the uterus, till it was expelled by contraction.

"In the above case I made counter-pressure over the pubis, finding the uterus yield so much from my reach, owing to the relaxed state of the vagina; and my object in administering the ergot was to secure uniform constriction.

"It is said by Cazeaux that inversion of the uterus having once taken place

in a labour, there is a tendency to its recurrence at a subsequent delivery, and I regret that in this instance an opportunity has not been afforded of testing this fact."—*Dublin Quart. Journ. Med. Sci.* Feb. 1854.

38. *Phlegmasia Dolens in the Non-Puerperal State*.—Dr. McClinTock read to the Dublin Obstetrical Society (April 30, 1853), a communication upon phlegmasia dolens, as a disease of women *not* in a puerperal state. After a brief historical sketch of the notices by Puzos, Willan, Lce, Copeland, Meigs, and others, of this disease under the circumstances just mentioned, he proceeded to narrate an instance of the kind that had fallen within his own knowledge.

The case differed from those related by any of the above authors in its purely idiopathic character. The possibility of any chronic uterine disease having existed was not admissible, neither had there been anything like symptoms of metritis, nor yet was the crural attack preceded by sudden suppression of the catamenia.

The subject of the case was a young lady, aged eighteen, who had been for some time under treatment for scanty menstruation and symptoms of incipient chlorosis, consequent upon a change of residence from the country to town. One evening in autumn, whilst the menses were present—though, as usual, in small quantity—she stood for nearly two hours together on damp grass. On the following morning she felt the right leg rather stiff and painful; towards evening it grew worse, and began to swell. Two or three days passed over before alarm was excited, or any treatment adopted, and by this time the symptoms had become fully developed. The pulse was 120; the right leg was swollen, tense, and free from discoloration; no pitting on pressure; not much pain complained of, unless the limb was moved or handled; marked tenderness in the groin, over the femoral vessels. The line of treatment pursued was the same as that usually employed for phlegmasia dolens, and consisted in the application of leeches over the femoral vessels in Scarpa's space, constant stuping of the entire limb, absolute rest, and low diet. Under this management, the acute symptoms subsided in the course of a week. One relapse took place, which necessitated a recourse to the antiphlogistic treatment, and considerably retarded her convalescence: after this was subdued, some stiffness, and enlargement of the leg from the knees down, still remained, and continued for very many months, in spite of bandaging, frictions, &c. These symptoms were always increased towards evening, or after much walking or standing. Nearly eight months elapsed before the limb had so far recovered its former state and condition that she could use it in the ordinary movements of progression without feeling any pain or inconvenience.

In conclusion the author remarked, that in this case the existence of chlorosis, which is universally held to be a blood disease, tended to confirm the views of Dr. M'Kenzie, in regard to the etiology of phlegmasia dolens, that physician being of opinion that vitiation of the blood has much to do with its production.—*Dublin Quarterly Journ. Med. Science*, Nov. 1853.

39. *Duration of Pregnancy*.—Dr. J. MATHEWS DUNCAN, in an interesting paper (*Monthly Journ. Med. Sci.* March, 1854), gives the following conclusions:—

1. That the interval between conception and parturition (the real duration of pregnancy) has not been exactly ascertained in any case.
2. That the average interval between insemination and parturition (commonly called the duration of pregnancy) is 275 days.
3. That the average interval between the end of menstruation and parturition is 278 days.
4. That the intervals between insemination and parturition, and between menstruation and parturition, have no standard length, but vary within certain limits.
5. That while absolute proof of the prolongation of real pregnancy beyond its usual limits is still deficient, yet there is evidence to establish the probability that it may be protracted beyond such limits to the extent of three or even four weeks.